

REMARKS

The Examiner is thanked for the thorough examination of this application. The Office Action, however, rejected all elected claims 10-17. Applicant continues to disagree with the restriction in this application. However, in order to expedite the examination of this application, Applicant has canceled elected claims 10-17, along with the withdrawn claims 1-9 and 18-25. In place of these claims, Applicant has added new claims 26-40, which clearly define over the cited art of record.

Support for new claims 26, 33 and 38 can be found in the application at least on pages 10-15 and in FIGs. 3, 4, and 6. Specifically, the claimed features can be found on page 14, lines 13-22 and page 15, lines 1-6. Accordingly, no new matter has been added to this application by the addition of these new claims.

Rejections Under 35 U.S.C. 102(b) of Claims 10-17

Claims 10-17 were rejected under 35 U.S.C. 102(b) as being unpatentable by Marr et al (USPN 6323534, hereinafter “Marr”). This rejection is moot, insofar as claims 10-17 have been cancelled and replaced with new claims 26-40 and it is respectfully requested that these rejections be withdrawn. Claims 26, 33 and 38 are independent claims, from which claims 27-32, 34-37, and 39-40 depend. Applicant submits that claims 26, 33, and 38 are patentable for at least the reasons discussed below, and therefore for at least the same reasons, dependent claims 27-32, 34-37, and 39-40 are patentable.

The Office Action alleged that “Marr discloses a plurality of lines comprising a semiconductor overlying a substrate; and a metal-semiconductor alloy overlying a first group of said lines but not overlying a second group of said lines- overlies only a portion of the polysilicon regions or lines.”

New claims 26, 33, and 38 recite:

26. A programmable resistor device in an integrated circuit device, comprising:
a substrate with individual lines disposed between a first terminal and a second terminal, wherein any of the individual lines may be blown open by a current forced from the first terminal to the second terminal; and

a first line of the individual lines having a first resistance different from a second line.

33. A programmable resistor device in an integrated circuit device, comprising:

a substrate with individual lines disposed between a first terminal and a second terminal, wherein any of the individual lines may be blown open by a current forced from the first terminal to the second terminal; and

a layer of metal or metal-semiconductor alloy overlying a first line of the individual lines but not overlying a second line of the individual lines, the first line with the layer of metal or metal-semiconductor alloy having a resistance smaller than that of the second line.

38. A programmable resistor device in an integrated circuit device, comprising:

a substrate with individual lines disposed between a first terminal and a second terminal, wherein any of the individual lines may be blown open by a current forced from the first terminal to the second terminal; and

a first line of the individual lines being doped and a second line of the individual lines being non-doped, the first line having a resistance smaller than that of the second line

(Emphasis Added)

It is clear that **a substrate having individual lines** is provided, as recited in claims 26, 33, and 38.

Also, the different resistance of the first line and the second line is explicitly disclosed.

In contrast, as disclosed by Marr in column 6, lines 29-40 and FIG 2:

“A conductive central region 26, which is also referred herein as a central region or as a first region, of fuse 20 is disposed between terminal ends 22 and 24 and facilitates communication between terminal ends 22 and 24. Central region 26 is disposed adjacent common well 14. *A narrowed region 28, or necked-down region, of fuse 20 may be disposed between conductive region 26 and terminal end 24, adjacent the boundary, border, or interface between well 18 and common well 14. Narrowed region 28 preferably has a smaller volume of conductive material than terminal ends 22 and 24 and than central region 26.*”

(Emphasis Added)

Referring to the contents and the figure 1A in Marr, **a single metal fuse line comprising a narrowed region 28, a conductive region 26, and terminal end 22 and 24** is disposed adjacent well 18 and common well 14. In addition, it is adapted to form different resistances within the single metal fuse. Furthermore, Marr does not disclose **a substrate with individual lines and different resistance of the first line and the second line**, as recited in claims 26, 33, and 38. Thus, it can be seen that characteristics of the fuse disclosed in Marr differentiate from the lines recited in claims 26, 33, and 38. Accordingly,

application of Marr to claims 10-17 clearly does not apply to the newly-added claims.

The Applicant has reviewed the prior art cited by the Examiner and submits that the new claims clearly and distinctly define over all such art. Accordingly, the subject patent application has been placed in condition of allowance, and such action is respectfully requested.

Hence it is respectfully asserted that newly added independent claims 26, 33, and 38 are allowable over the cited reference (Marr et al). Insofar as claims 27-32, 34-37, and 39-40, separately depend from added claims 26, 33, and 38, these claims are also allowable at least by virtue of their dependency.

Should Examiner feel that further discussion of the application and the Amendment is conducive to prosecution and allowance thereof, please do not hesitate to contact the undersigned at the address and telephone listed below.

No fee is believed to be due in connection with this amendment and response to Office Action. If, however, any fee is believed to be due, you are hereby authorized to charge any such fee to deposit account No. 20-0778.

Respectfully submitted,

By: 
Daniel R. McClure
Registration No. 38,962

Thomas, Kayden, Horstemeyer & Risley, LLP
100 Galleria Pkwy, NW
Suite 1750
Atlanta, GA 30339
770-933-9500